

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1-10. Claims 1-4 are elected for prosecution. Claims 5-10 are withdrawn due to a restriction requirement.

Prior Art Rejections

Claims 1-2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nguyen et al. (U.S. 4,530,961).

Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Winnik et al. (U.S. 5,145,518).

Claims 3-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen et al. as applied to claim 1.

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Winnik et al. as applied to claim 1.

Applicants respectfully traverse each of these rejections.

1. The Present Invention

The present invention is directed to a printing ink which comprises micelle particles formed by aggregating ammonium acrylate with dispersed particles containing phenol resin. The printing ink of the present invention further comprises a dispersion medium for dispersing the micelle particles.

2. Nguyen et al.

Nguyen et al. discloses an aqueous suspension, or dispersion, of carbon black. The carbon black of Nguyen et al. may include phenol groups, and is grafted (chemically bonded) with ammonium polyacrylate. The Examiner asserts that the carbon black disclosed by Nguyen et al. reads on the phenol resin of the present claims. However, the ammonium acrylate of the present claims is not chemically bonded with the phenol resin, but is aggregated with dispersed particles containing phenol resin. See claim 1. Accordingly, all of the features of the present claims are not disclosed or suggested by Nguyen et al.

In addition, Nguyen et al. discloses that the phenol group included in the carbon black acts a polymerization quencher. See column 3, lines 24-25. Since the major part of the carbon black is carbonaceous, the amount of phenol groups in the carbon black must necessarily be small. Therefore, it is reasonable to conclude that all of the phenol groups react in the preparation of the aqueous suspension. The aqueous suspension would then not include phenol groups.

Accordingly, Nguyen et al. does not disclose or suggest micelle particles formed by aggregating ammonium acrylate with dispersed particles containing phenol resin. Nguyen et al. also does not disclose or suggest the presently claimed phenol resin since, as discussed above, the carbon black used by Nguyen et al. would not be expected to include phenol groups and therefore would not read on the phenol resin of claim 1.

3. Winnik et al.

Winnik et al. discloses a micelle made of a hydrophilic segment A, and a hydrophobic segment B. The hydrophilic segment A of Winnik et al. must necessarily correspond to the ammonium acrylate of the present claim 1. The hydrophobic segment B must necessarily then correspond to the phenol resin of claim 1. The Examiner argues in the Office Action that the monocarboxylic acid mentioned at column 9, line 37 is acryl acid, and the ammonium hydroxide mentioned at column 10, line 55 is present in the solution. The Examiner then asserts that this

produces the same final product as the presently claimed ammonium acrylate in water. See Office Action, page 5.

However, the ester of monocarboxylic acid mentioned at column 9, lines 37-38 is clearly disclosed by Winnik et al. as the hydrophobic segment B. See Winnik et al., column 9, line 21. In addition, the monocarboxylic acid mentioned by Winnik et al. is not acryl acid. Accordingly, Winnik et al. does not disclose or suggest ammonium acrylate aggregated with particles containing phenol resin as recited in present claim 1.

The Examiner also argues that Winnik et al. discloses triphenodioxazine at column 11, line 58 as a phenol resin. However, triphenodioxazine is an aqueous dye which is bonded to the surface of the micelle and is not a phenol resin. See column 11, lines 55-56. Winnik et al. does not disclose or suggest the phenol resin recited in present claim 1. Accordingly, Winnik et al. does not disclose or suggest all of the features of the present claims and this rejection should be withdrawn.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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